

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. The second occurrence of claim 49 is amended (now claim 50) and former claim 50 (now claim 51) is amended.

1. (Previously Presented) A spray applicator, comprising:

a gun configured to receive a liquid and atomize the liquid; and

a supply vessel coupled to the gun that supplies the liquid to the gun, the supply vessel retaining a volume of the liquid and including a level sensor responsive to the volume retained by the supply vessel, the level sensor including a first electrode spaced apart from a second electrode, the first electrode and the second electrode being positioned adjacent to a wall of the supply vessel, the first electrode and the second electrode being spaced apart from the wall of the supply vessel by an insulating layer interposed between the wall and the first and second electrodes.

2. (Previously Presented) The spray applicator of claim 1, wherein the first and second electrodes extend into the supply vessel, the first and second electrodes being configured to detect a liquid volume by sensing a resistance property of the liquid.

3. (Original) The spray applicator of claim 1, wherein the level sensor further includes a control system coupled to the supply vessel that generates a signal when a predetermined liquid volume is retained in the supply vessel.

4. (Original) The spray applicator of claim 3, wherein the level sensor further includes an alarm device coupled to the control system to receive the signal and generate an alarm indication.

5-8. (Canceled)

9. (Original) The spray applicator of claim 3, wherein the control system includes a current-sensing network coupled to a voltage source.

10. (Original) The spray applicator of claim 3, wherein the control system includes a voltage-sensing network coupled to a current source.

11. (Previously Presented) A level-sensing supply vessel for a spray applicator, comprising:

a level sensor responsive to a volume of a liquid retained by the supply vessel, the sensor including a sensor element configured to detect the volume by sensing a resistance property of the liquid, the level sensor including a first electrode spaced apart from a second electrode, the first electrode and the second electrode being positioned adjacent to a wall of the supply vessel, the first electrode and the second electrode being spaced apart from the wall of the supply vessel by an insulating layer interposed between the wall and the first and second electrodes.

12. (Original) The level-sensing supply vessel of claim 11, wherein the level sensor further includes a control system coupled to the supply vessel that generates a signal when a predetermined liquid volume is retained in the supply vessel.

13. (Original) The level-sensing supply vessel of claim 12, wherein the level sensor further includes an alarm device coupled to the control system to receive the signal and generate an alarm indication.

14-17. (Canceled)

18. (Previously Presented) The level-sensing supply vessel of claim 12, wherein the control system includes a current-sensing network coupled to a voltage source.

19. (Previously Presented) The level-sensing supply vessel of claim 12, wherein the control system includes a voltage-sensing network coupled to a current source.

20. (Previously Presented) A method of sensing a level of a liquid retained within a storage vessel of a spray applicator, comprising:

sensing a first volume of the liquid retained within the vessel solely based upon a first resistance value of the liquid;

removing a portion of the first volume to define a second volume within the storage vessel;

sensing the second volume solely based upon a second resistance value of the liquid;

comparing the first resistance value to the second resistance value; and

generating an alarm signal if the second resistance value is indicative of the second volume being less than a predetermined minimum volume.

21-22. (Canceled)

23. (Original) The method of claim 20, wherein generating an alarm signal further comprises generating an audible alarm.

24. (Original) The method of claim 20, wherein generating an alarm signal further comprises generating a visual alarm.

25. (Original) The method of claim 20, wherein removing a portion of the first volume to define a second volume further comprises expelling the portion through a spray gun coupled to the supply vessel.

26. (Previously Presented) A spray applicator, comprising:
a gun configured to receive a liquid and atomize the liquid; and
a supply vessel coupled to the gun that supplies the liquid to the gun, the supply vessel retaining a volume of the liquid and including a level sensor responsive to the volume retained by the supply vessel, the level sensor including a first electrode spaced apart from a second electrode, the first electrode and the second electrode being formed on opposing sides of an insulating substrate.

27. (Previously Presented) The spray applicator of claim 26, wherein the first and second electrodes extend into the supply vessel, the first and second electrodes being configured to detect a liquid volume by sensing a resistance property of the liquid.

28. (Previously Presented) The spray applicator of claim 26, wherein the level sensor further includes a control system coupled to the supply vessel that generates a signal when a predetermined liquid volume is retained in the supply vessel.

29. (Previously Presented) The spray applicator of claim 28, wherein the level sensor further includes an alarm device coupled to the control system to receive the signal and generate an alarm indication.

30. (Previously Presented) The spray applicator of claim 28, wherein the control system includes a current-sensing network coupled to a voltage source.

31. (Previously Presented) The spray applicator of claim 28, wherein the control system includes a voltage-sensing network coupled to a current source.

32. (Previously Presented) A spray applicator, comprising:
a gun configured to receive a liquid and atomize the liquid; and
a supply vessel coupled to the gun that supplies the liquid to the gun, the supply vessel retaining a volume of the liquid and including a level sensor responsive to the volume retained by the supply vessel, the level sensor including a first electrode spaced apart from a second electrode, the first electrode and the second electrode being positioned adjacent to a wall of the supply vessel, the supply vessel further including a wall that comprises one of the first electrode and the second electrode.

33. (Previously Presented) The spray applicator of claim 31, wherein the first and second electrodes extend into the supply vessel, the first and second electrodes being configured to detect a liquid volume by sensing a resistance property of the liquid.

34. (Previously Presented) The spray applicator of claim 31, wherein the level sensor further includes a control system coupled to the supply vessel that generates a signal when a predetermined liquid volume is retained in the supply vessel.

35. (Previously Presented) The spray applicator of claim 31, wherein the level sensor further includes an alarm device coupled to the control system to receive the signal and generate an alarm indication.

36. (Previously Presented) The spray applicator of claim 35, wherein the control system includes a current-sensing network coupled to a voltage source.

37. (Previously Presented) The spray applicator of claim 35, wherein the control system includes a voltage-sensing network coupled to a current source.

38. (Previously Presented) A level-sensing supply vessel for a spray applicator, comprising:

a level sensor responsive to a volume of a liquid retained by the supply vessel, the sensor including a sensor element configured to detect the volume by sensing a resistance property of the liquid, the sensor element including a first electrode spaced apart from a second electrode, the first electrode and the second electrode being formed on opposing sides of an insulating substrate.

39. (Previously Presented) The level-sensing supply vessel of claim 38, wherein the level sensor further includes a control system coupled to the supply vessel that generates a signal when a predetermined liquid volume is retained in the supply vessel.

40. (Previously Presented) The level-sensing supply vessel of claim 39, wherein the level sensor further includes an alarm device coupled to the control system to receive the signal and generate an alarm indication.

41. (Previously Presented) The level-sensing supply vessel of claim 39, wherein the control system includes a current-sensing network coupled to a voltage source.

42. (Previously Presented) The level-sensing supply vessel of claim 39, wherein the control system includes a voltage-sensing network coupled to a current source.

43. (Previously Presented) A spray applicator, comprising:
a gun configured to receive a liquid and atomize the liquid; and
a supply vessel coupled to the gun that supplies the liquid to the gun, the supply vessel retaining a volume of the liquid and including a level sensor responsive to the volume retained by the supply vessel, the level sensor including a sensor element configured to detect a liquid volume solely by sensing a resistance property of the liquid.

44. (Previously Presented) The spray applicator of claim 43, wherein the level sensor further includes a control system coupled to the supply vessel that generates a signal when a predetermined liquid volume is retained in the supply vessel.

45. (Previously Presented) The spray applicator of claim 44, wherein the level sensor further includes an alarm device coupled to the control system to receive the signal and generate an alarm indication.

46. (Previously Presented) The spray applicator of claim 43, wherein the sensor element further comprises:

a first electrode; and
a second electrode spaced apart from the first electrode.

47. (Previously Presented) The spray applicator of claim 46, wherein the first electrode and the second electrode are positioned adjacent to a wall of the supply vessel, the first electrode and the second electrode being spaced apart from the wall of the supply vessel by an insulating layer interposed between the wall and the first and second electrodes.

48. (Previously Presented) The spray applicator of claim 46, wherein the first electrode and the second electrode are formed on opposing sides of an insulating substrate.

49. (Previously Presented) The spray applicator of claim 46, wherein the supply vessel further includes a wall that comprises one of the first electrode and the second electrode.

4950. (Currently Amended) The spray applicator of claim 44, wherein the control system includes a current-sensing network coupled to a voltage source.

5051. (Currently Amended) The spray applicator of claim 44, wherein the control system includes a voltage-sensing network coupled to a current source.